CRDISKIT001A00

Variable Frequency Drive (VFD) Remote Keypad Kit

Installation Instructions

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloths for brazing operations and have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and appropriate national electrical codes (in USA, ANSI/NFPA70, National Electrical Code (NEC); in Canada, CSA C22.1) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. These words are used with the safety-alert symbol.

DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death.

CAUTION is used to identify unsafe practices, which **may** result in minor personal injury or product and property damage.

NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could cause personal injury or death.

Before performing service or maintenance operations on unit, always turn off main power switch to unit and install lock(s) and lockout tag(s). Unit may have more than one power switch. Ensure electrical service to rooftop unit agrees with voltage an amperage listed on the unit rating plate.

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts and servicing air conditioning equipment.

Table 1 – VFD Remote Keypad Kit Contents

COMPONENT NAME	COMPONENT NUMBER	QTY
Cable Cat5 Data 6 ft.	48TM504482	1
Key Pad VFD Hand Held	50TM501767	1
Instructions VFD Display	IIK–CRDISKIT01–04	1

Table 2 – 48TC Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
48TC 08	2250	2250	1485
48TC 09	2550	2873	1896
48TC 12	3000	3380	2231
48TC 14	3600	4225	2789
48TC 16	4500	5625	3713
48TC 17	4500	4500	2970
48TC 20	5250	5250	3465
48TC 24	6000	6000	3960
48TC 28	7500	8450	5577
48TC 30	8250	8250	5445

Table 3 – 580J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
580J*08	2250	2250	1485
580J*09	2550	2873	1896
580J*12	3000	3380	2231
580J*14	3600	4225	2789
580J*16	4500	5625	3713
580J*17	4500	4500	2970
580J*20	5250	5250	3465
580J*24	6000	6000	3960
580J*28	7500	8450	5577
580J*30	8250	8250	5445

Table 4 – RGS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RGS090	2250	2250	1485
RGS120	3000	3380	2231
RGS150	3600	4225	2789
RGS180	4500	5625	3713
RGS210/213	5250	5250	3465
RGS240/243	6000	6000	3960
RGS300/303	7500	8450	5577
RGS336/333	8250	8250	5445

Table 5 – 50TC Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
50TC 08	2250	2250	1485
50TC 09	2550	2873	1896
50TC 12	3000	3380	2231
50TC 14	3600	4225	2789
50TC 16	4500	5625	3713
50TC 17	4500	4500	2970
50TC 20	5250	5250	3465
50TC 24	6000	6000	3960
50TC 28	7500	8450	5577
50TC 30	8250	8250	5445

Table 6 – 558J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
558J*08	2250	2250	1485
558J*09	2550	2873	1896
558J*12	3000	3380	2231
558J*14	3600	4225	2789
558J*16	4500	5625	3713
558J*17	4500	4500	2970
558J*20	5250	5250	3465
558J*24	6000	6000	3960
558J*28	7500	8450	5577
558J*30	8250	8250	5445

Table 7 – RAS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RAS090	2250	2250	1485
RAS120	3000	3380	2231
RAS150	3600	4225	2789
RAS180	4500	5625	3713
RAS210/213	5250	5250	3465
RAS240/243	6000	6000	3960
RAS300/303	7500	8450	5577
RAS336/333	8250	8250	5445

Table 8 – 50TCQ Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
50TCQ 08	2250	2535	1673
50TCQ 09	2550	2873	1896
50TCQ 12	3000	3000	1980
50TCQ 14	3750	4225	2789
50TCQ 17	4500	5070	3346
50TCQ 24	6000	6760	4462

Table 9 – 548J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
548J*08	2250	2535	1673
548J*09	2550	2873	1896
548J*12	3000	3000	1980
548J*14	3750	4225	2789
548J*17	4500	5070	3346
548J*24	6000	6760	4462

Table 10 – RHS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RHS090	2250	2535	1673
RHS102	2550	2873	1896
RHS120	3000	3000	1980
RHS150	3750	4225	2789
RHS181/183	4500	5070	3346
RHS240/243	6000	6760	4462

Table 11 – 48HC Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
48HC 08	2250	2535	1673
48HC 09	2550	2550	1683
48HC 11	3000	3380	2231
48HC 12	3000	3380	2231
48HC 14	3750	4225	2789
48HC 17	4500	5070	3346
48HC 20	5250	5915	3904
48HC 24	6000	7500	4950
48HC 28	7500	8450	5577

Table 12 – 581J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
581J*08	2250	2535	1673
581J*09	2550	2550	1683
581J*11	3000	3380	2231
581J*12	3000	3380	2231
581J*14	3750	4225	2789
581J*17	4500	5070	3346
581J*20	5250	5915	3904
581J*24	6000	7500	4950
581J*28	7500	8450	5577

Table 13 – RGH Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RGH090	2250	2535	1673
RGH110	3000	3380	2231
RGH120	3000	3380	2231
RGH150	3750	4225	2789
RGH181/183	4500	5070	3346
RGH210/213	5250	5915	3904
RGH240/243	6000	7500	4950
RGH300/303	7500	8450	5577

Table 14 – 50HC Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
50HC 08	2250	2535	1673
50HC 09	2550	2550	1683
50HC 11	3000	3380	2231
50HC 12	3000	3380	2231
50HC 14	3750	4225	2789
50HC 17	4500	5070	3346
50HC 20	5250	5915	3904
50HC 24	6000	7500	4950
50HC 28	7500	8450	5577

Table 15 – 551J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
551J*08	2250	2535	1673
551J*09	2550	2550	1683
551J*11	3000	3380	2231
551J*12	3000	3380	2231
551J*14	3750	4225	2789
551J*17	4500	5070	3346
551J*20	5250	5915	3904
551J*24	6000	7500	4950
551J*28	7500	8450	5577

Table 16 – RAH Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RAH090	2250	2535	1673
RAH110	3000	3380	2231
RAH120	3000	3380	2231
RAH150	3750	4225	2789
RAH181/183	4500	5070	3346
RAH210/213	5250	5915	3904
RAH 240/243	6000	7500	4950
RAH300/303	7500	8450	5577

Table 17 – 50HCQ Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
50HCQ 08	2250	2250	1485
50HCQ 09	2550	2873	1896
50HCQ 12	3000	3380	2231

Table 18 – 549J* Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
549J*08	2250	2250	1485
549J*09	2550	2873	1896
549J*12	3000	3380	2231

Table 19 – RHH Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
RHH090	2250	2250	1485
RHH102	2550	2873	1896
RHH120	3000	3380	2231

Table 20 – 40RUA/RUS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
40RUA/RUS 12	3000	3380	2231
40RUA/RUS 14	3750	4225	2789
40RUA/RUS 16	4500	4500	2970
40RUA/RUS 25	6000	6000	3960
40RUA/RUS 28	7500	8450	5577
40RUA/RUS 30	9000	9295	6135

Table 21 – 524J*A Min CFM Per Fan Motor Type**

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
524J*12A	3000	3380	2231
524J*14A	3750	4225	2789
524J*16A	4500	4500	2970
524J*25A	6000	6000	3960
524J*28A	7500	8450	5577

Table 22 – FAS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
FAS120	3000	3380	2231
FAS150	3750	4225	2789
FAS180	4500	4500	2970
FAS240	6000	6000	3960
FAS300	7500	8450	5577

Table 23 – 40RUQ Min CFM Per Fan Motor Type

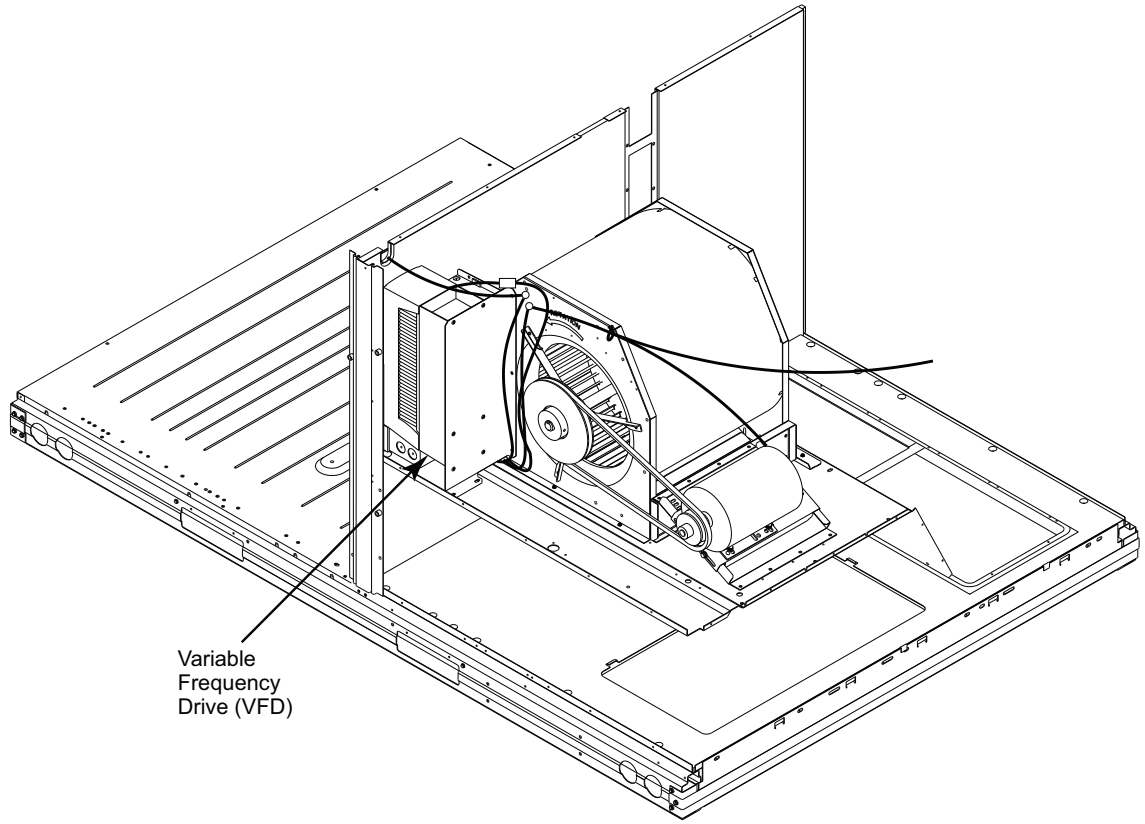
Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
40RUQ 12	3000	3380	2231
40RUQ 16	4500	4500	2970
40RUQ 25	6000	6000	3960

Table 24 – 524J*H Min Min CFM Per Fan Motor Type**

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
524J*12H	3000	3380	2231
524J*16H	4500	4500	2970
524J*25H	6000	6000	3960

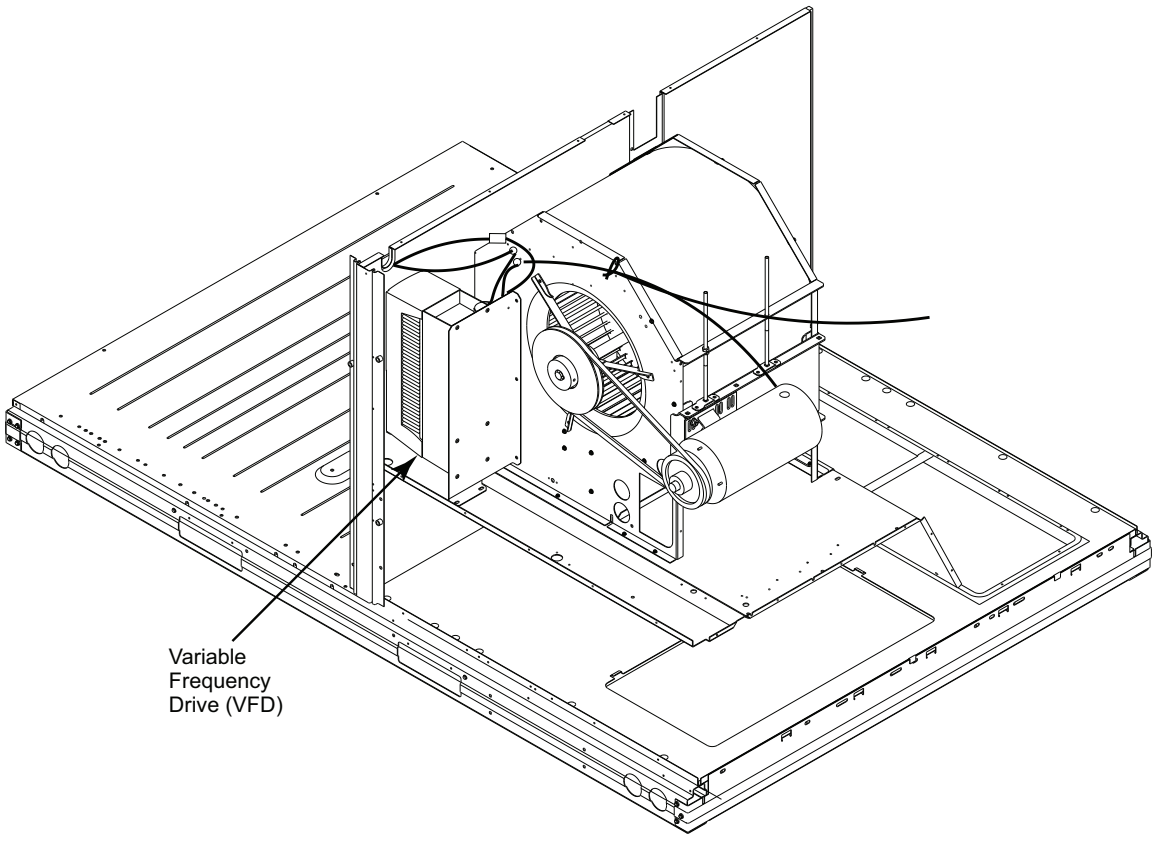
Table 25 – FHS Min CFM Per Fan Motor Type

Model – Size	Single Speed Fan Motor	2–Speed Fan Motor (at high speed)	2–Speed Fan Motor (at low speed)
FHS120	3000	3380	2231
FHS180	4500	4500	2970
FHS240	6000	6000	3960



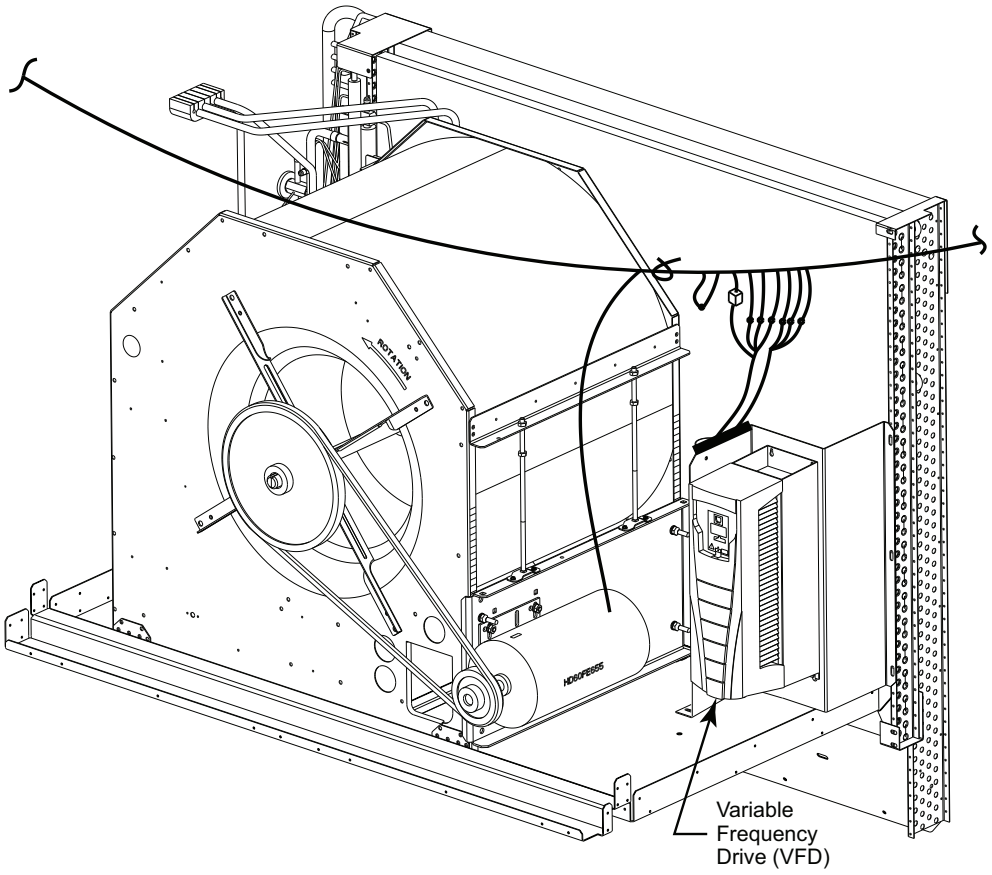
C11528

Fig. 1 - VFD Location for the following units: 48/50TC 08-12, 50TCQ 08-09, 48/50HC 08-09 and 50HCQ 08 580J/558J*08-12, 548J*08-09, 581J/551J*08-09 and 549J*08 RAH090, RGH090, RGS/RAS090, RGS/RAS120, RHH090, RHS090, RHS102



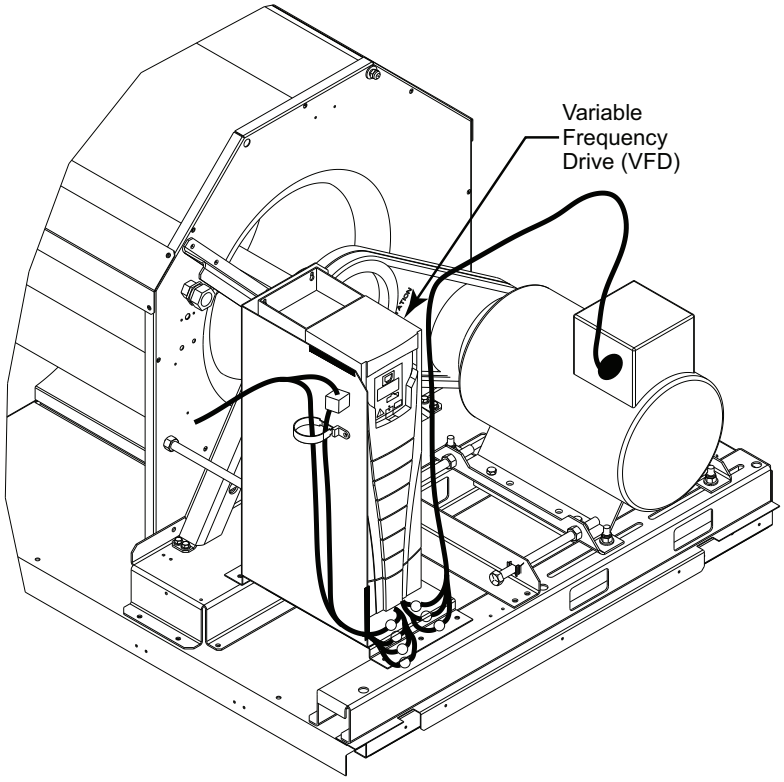
C11529

Fig. 2 - VFD Location for the following units: 48/50TC 14, 50TCQ 12, 48/50HC 11, 48/50HC 12 and 50HCQ 09 580J/558J*14, 548J*12, 581J/551J*11, 581J/551J*12 and 549J*09 RGS/RAS150, RHH102, RHS120 and RGH/RH1100, RGH/RAH110, RGH/RAH120



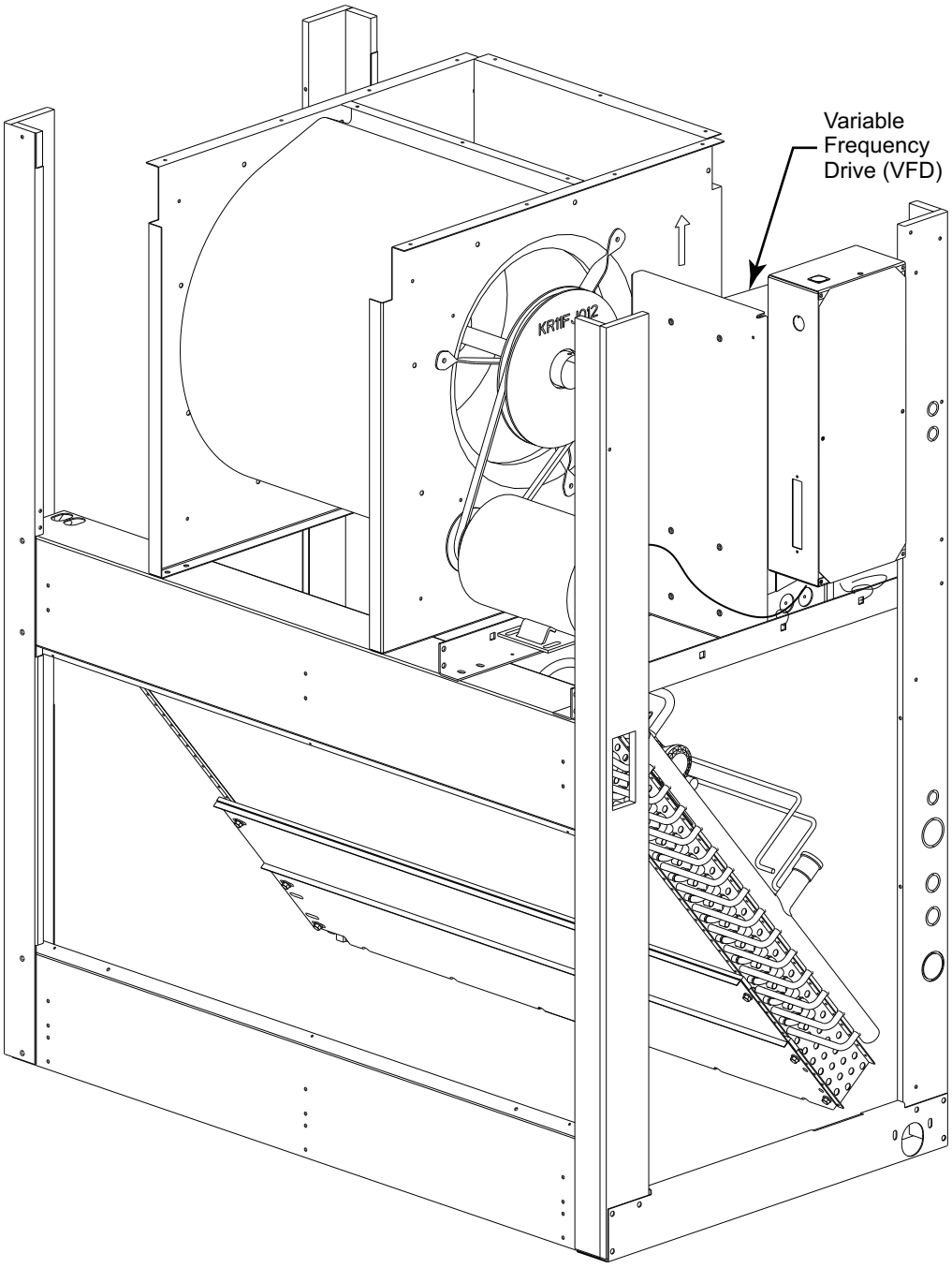
C11530

Fig. 3 - VFD Location for the following units: 48/50TC 16, 50TCQ 14, 48/50HC 14 and 50HCQ 12
580J/558J*16, 548J*14, 581J/551J*14 and 549J12
RGS/RAS180, RHS150, RGH/RAH150 and RHH120



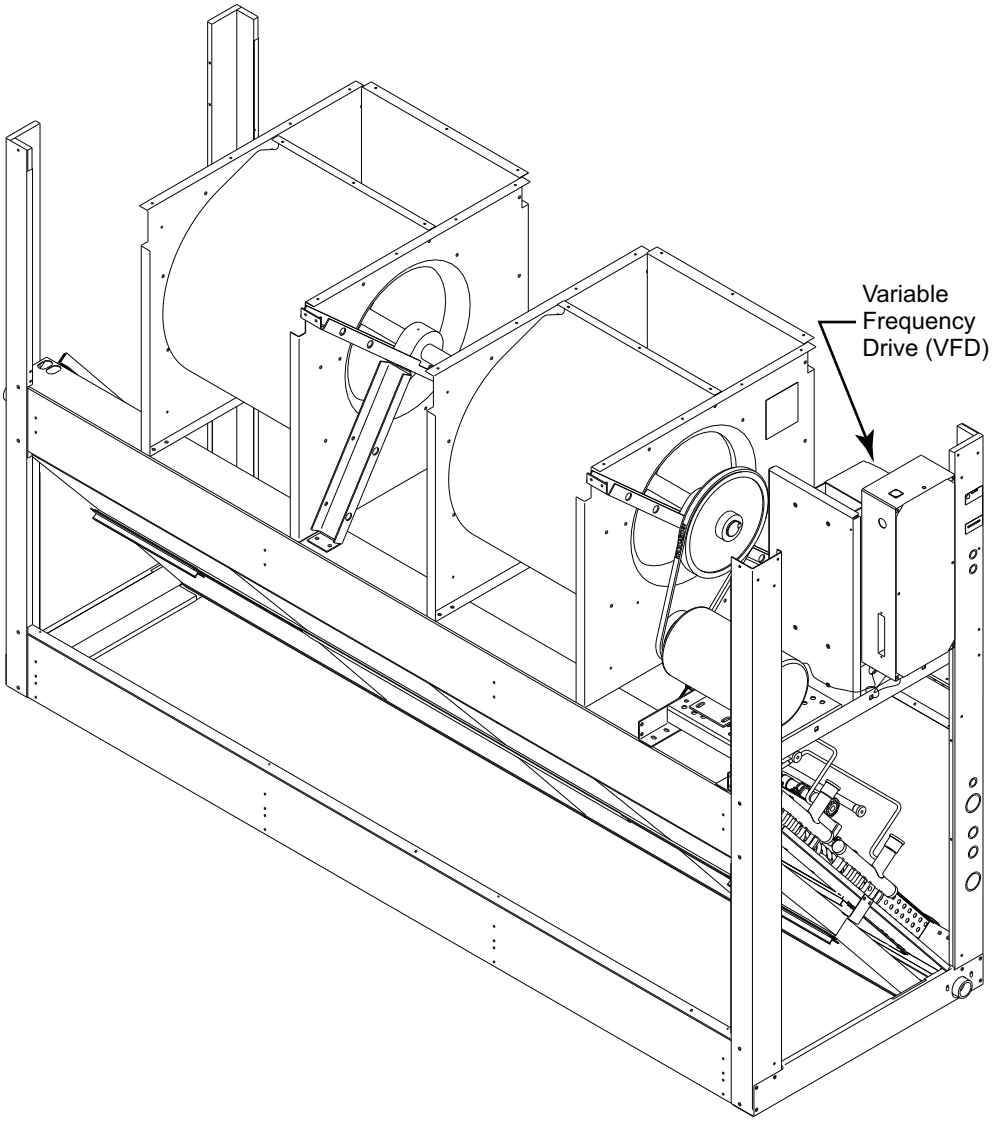
C11531

Fig. 4 - VFD Location for the following units: 48/50TC 17-30, 50TCQ 17-24 and 48/50HC 17-28
580J/55J*17-30, 548J*17-24 and 581J/551J*17-28
RGS/RAS210-303, RHS181-243 and RGH/RAH181-303



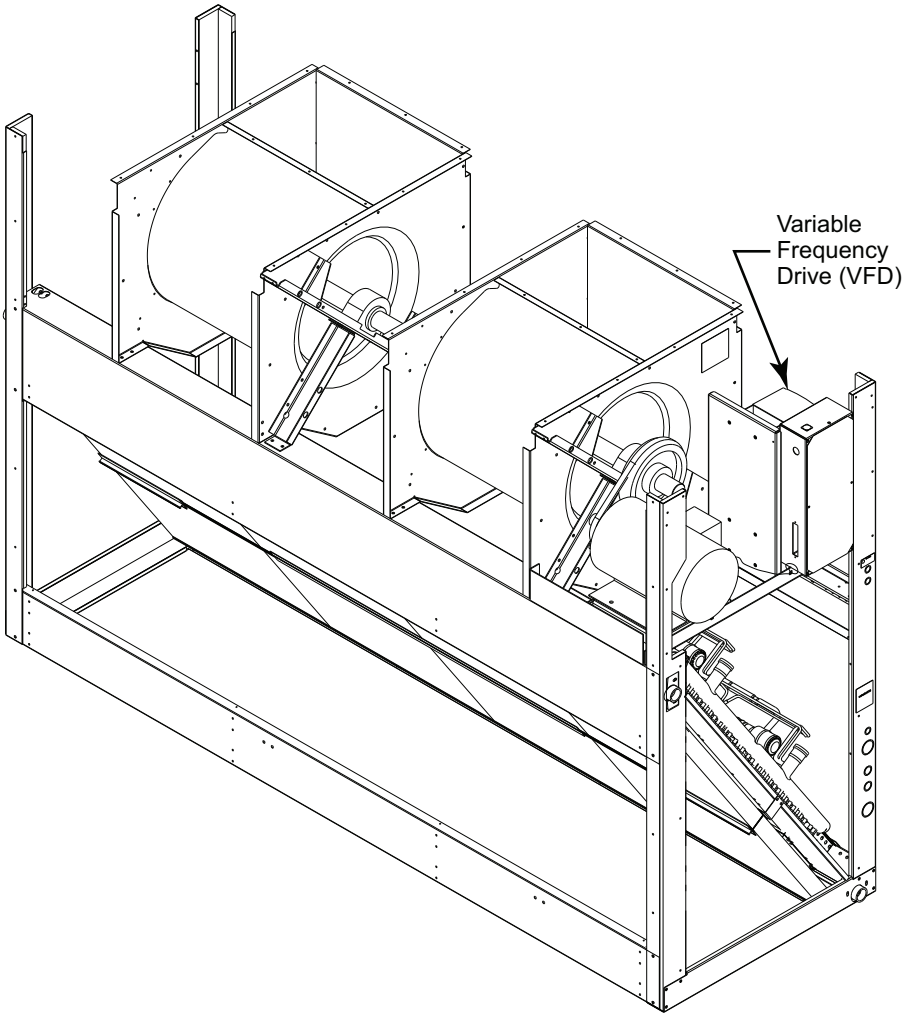
C11532

Fig. 5 - VFD Location for the following units: 40RUA/RUS/RUQ 12 524J*12A and 524J*12H FAS/FHS120



C11533

Fig. 6 - VFD Location for the following units: 40RUA/RUS 14-25, 40RUQ 16-25 524J*14A-524J*25A and 524J*16H-524J-25H FAS150-240, FHS180-240

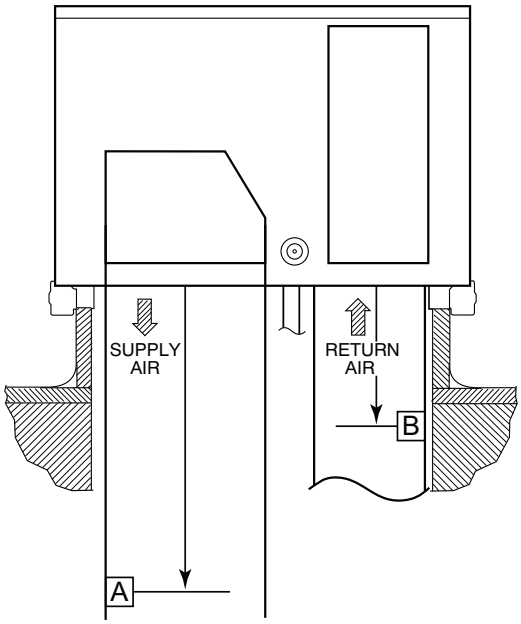


C11534

Fig. 7 - VFD Location for the following units: 40RUA/RUS 28-30
524J*28A
FAS300

Operating Fan for Test & Balance

During the Test and Balance procedure, it is necessary to operate the supply fan in High Speed without concurrent operation of the Cooling or Heating systems. Use the following procedure to force the fan speed to High.



C12013

Fig. 8 - Measuring External Static Pressure — Distance Below Unit Base

ARI PRESSURE LOCATIONS					
MODEL	SIZES	IN Supply Air [A]	IN Return Air [B]	MM Supply Air [A]	MM Return Air [B]
48/50HC	04–06	32	10	830	260
	07–12	43.5	12	1100	310
	14	64.5	14	1640	350
	17–28	83	19	2110	490
48/50TC	04–07	32	10	830	260
	08–14	43.5	12	1100	310
	16	64.5	14	1640	350
	17–30	83	19	2110	490
50HCQ	04–06	32	10	1100	310
	07–09	43.5	12	1100	310
	12	44.5	13	1130	330
50TCQ	04–07	32	10	830	260
	08–12	43.5	12	1100	310
	14	44.5	14	1130	350
	17–24	83	19	2110	490

ARI PRESSURE LOCATIONS					
MODEL	SIZES	IN Supply Air [A]	IN Return Air [B]	MM Supply Air [A]	MM Return Air [B]
581J/551J	04–06	32	10	830	260
	07–12	43.5	12	1100	310
	14	64.5	14	1640	350
	17–28	83	19	2110	490
580J/558J	04–07	32	10	830	260
	08–14	43.5	12	1100	310
	16	64.5	14	1640	350
	17–30	83	19	2110	490
549J	04–06	32	10	1100	310
	07–09	43.5	12	1100	310
	12	44.5	13	1130	330
548J	04–07	32	10	830	260
	08–12	43.5	12	1100	310
	14	44.5	14	1130	350
	17–24	83	19	2110	490

ARI PRESSURE LOCATIONS					
MODEL	SIZES	IN Supply Air [A]	IN Return Air [B]	MM Supply Air [A]	MM Return Air [B]
RGH/ RAH	090–120	43.5	12	1100	310
	150	64.5	14	1640	350
	181–303	83	19	2110	490
RGS/ RAS	090–140	43.5	12	1100	310
	181–336	83	19	2110	490
RHH	090–102	43.5	12	1100	310
	120	44.5	13	1130	330
RHS	090–120	43.5	12	1100	310
	150	44.5	14	1130	350
	181–243	83	19	2110	490

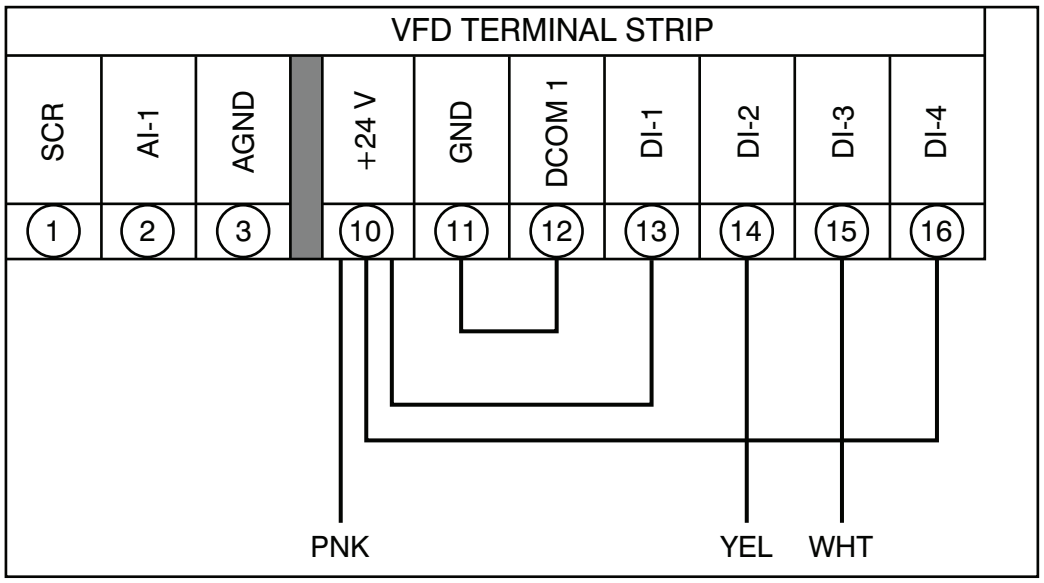
Unit with Accessory VFD Keypad:

1. Set the space thermostat to SYSTEM OFF and FAN in AUTO.
2. Disconnect unit power. Lock-out/tag out.
3. Open the fan access panel (see Fig. 1 through 7 for your specific unit).
4. Locate pressure ports or pitot tubes in the return duct and supply duct to measure external static pressure. See Fig. 8 for typical locations.
5. Restore unit power.
6. Set the space thermostat to FAN CONT.
7. At the VFD keypad, tap the UP arrow button to increase the motor speed until 60.0 is displayed on the display screen.
8. Check the motor speed with stroboscope or similar tool. Motor shaft speed must be in 1725-1760 RPM (28.8-29.3 r/s) range for High Speed.
9. Replace the fan access panel.
10. Perform Test & Balance procedure.

11. Adjust the supply fan speed according to base unit instructions to deliver the project selection CFM value. Ensure the selection CFM value is not lower that the "Min CFM Per Fan Motor Type" for this unit-size as found in Tables 2 through 25 on pages 2 through 4.

To restore the unit to ready-to-start condition, tap the keypad's DOWN arrow button to reduce motor speed until the 40.0 is displayed on the display screen. Disconnect the unit power and lock-out/tag-out, set the space thermostat to FAN AUTO. Remove the test pressure ports from the external duct locations. Restore unit power.

APPENDIX - REMOTE VFD KEYPAD REFERENCE



C13808

Fig. 9 - VFD Wiring

Table 26 – VFD Terminal Designations

TERMINAL	FUNCTION
U1 V1 W1	Three–Phase main circuit input power supply
U2 V2 W2	Three–Phase AC output to motor, 0V to maximum input voltage level
11 (GND) 12 (COMMON)	Factory–supplied jumper
10 (24VDC) 13 (DI–1)	Run (factory–supplied jumper)
10 (24VDC) 16 (DI–4)	Start Enable 1 (factory–supplied jumper). When opened, the drive goes to emergency stop
14 (DI–2) 15 (D1–3)	Factory wired for 24Vdc input from Fan Speed Board

NOTE: This Appendix only applies when a unit with the factory-installed Variable Frequency Drive (VFD) option is equipped with the filed-installed Remote VFD Keypad (Part Number: CRDISKKIT001A00).

On single package rooftop units and fan coils equipped with the factory-installed VFD option, the supply fan speed is controlled by a 3-phase VFD. See Fig. 1 through 7 for the location of the VFD in the various units covered in this manual.

The VFD is powered during normal operation to prevent condensation from forming on the boards during the off mode and is stopped by driving the speed to 0. The units use ABB VFDs. The interface wiring for the VFDs is shown in the Fig. 9. Terminal designations are shown in the Terminal Designation table (see Table 26). Configurations are shown in the VFD Parameters tables (see Tables 27 through 38 on pages 13 through 24).

VFD Operation with Remote Keypad

The VFD keypad is shown in Fig. 10. The function of SOFT KEYS 1 and 2 change depending on what is displayed on the screen. The function of SOFT KEY 1 matches the word in the lower left-hand box on the display screen. The function of SOFT KEY 2 matches the word in the lower right-hand box on the display screen. If the box is empty, then the SOFT KEY does not have a function on that specific screen. The UP and DOWN keys are used to navigate through the menus. The OFF key is used to turn off the VFD. The AUTO key is used to change control of the drive to automatic control. The HAND key is used to change control of the drive to local (hand held) control. The HELP button is used to access the help screens.

For the VFD to operate on the units covered by this document, the drive must be set in AUTO mode. The word "AUTO" will appear in the upper left hand corner of the VFD display. Press the AUTO button to set the drive in AUTO mode.

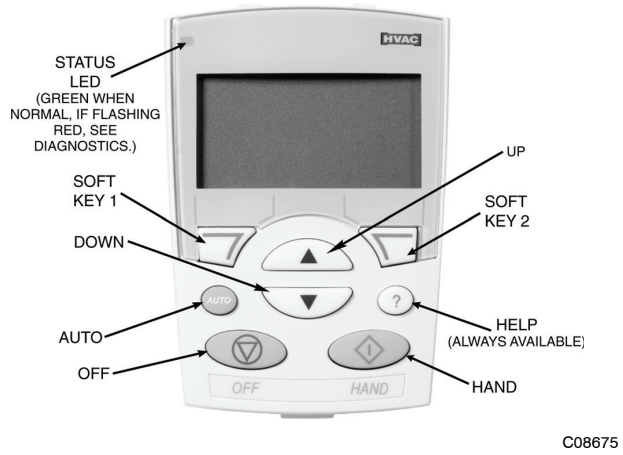


Fig. 10 - VFD Keypad

Start Up with Assistant

Initial start-up has been performed at the factory. Use of the start up assistant will override factory VFD configurations. DO NOT USE THE START-UP ASSISTANT ON THIS VFD APPLICAITON!

Start Up by Changing Parameters Individually

Initial start-up is performed at the factory. To start up the VFD with by changing individual parameters, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight PARAMETERS on the display screen and press ENTER (SOFT KEY 2).
3. Use the UP or DOWN keys to highlight the desired parameter group and press SEL (SOFT KEY 2).
4. Use the UP or DOWN keys to highlight the desired parameter and press EDIT (SOFT KEY 2).
5. Use the UP or DOWN keys to change the value of the parameter.
6. Press SAVE (SOFT KEY 2) to store the modified value. Press CANCEL (SOFT KEY 1) to keep the previous value. Any modifications that are not saved will not be changed.
7. Choose another parameter or press EXIT (SOFT KEY 1) to return to the listing of parameter groups. Continue until all the parameters have been configured and then press EXIT (SOFT KEY 1) to return to the main menu.

NOTE: The current parameter value appears above the highlight parameter. To view the default parameter value, press the UP and DOWN keys simultaneously. To restore the default factory settings, select the application macro "HVAC Default."

VFD Modes

The VFD has several different modes for configuring, operating, and diagnosing the VFD. The modes are:

1. Standard Display mode — shows drive status information and operates the drive
2. Parameters mode — edits parameter values individually
3. Start-up Assistant mode — guides the start up and configuration
4. Changed Parameters mode — shows all changed parameters
5. Drive Parameter Backup mode — stores or uploads the parameters
6. Clock Set mode — sets the time and date for the drive
7. I/O Settings mode — checks and edits the I/O settings

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 27 – SRT Unit VFD Parameters — 48/50TC 08-14, 50TCQ 08-12, 48/50HC 08-12 and 50HCQ 08-09

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA364	ACH550–U0–012A–2	1.7 HP 230V	HD56FR233	230	5.8	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	1.7 HP 460V	HD56FR463	460	2.9	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA366	ACH550–U0–017A–2	1.7 HP 575V	HD56FR579	575	3.1	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–06A9–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–06A9–4	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–06A9–4	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–012A–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–03A9–6	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–09A0–6	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–07A5–2	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–02A7–6	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 28 – SRT Unit VFD Parameters — 580J/558J*08-14, 548J08-12, 581J/551J*08-12 and 549J*08-09

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA364	ACH550–U0–012A–2	1.7 HP 230V	HD56FR233	230	5.8	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	1.7 HP 460V	HD56FR463	460	2.9	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA366	ACH550–U0–017A–2	1.7 HP 575V	HD56FR579	575	3.1	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–06A9–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–06A9–4	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–06A9–4	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–012A–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–03A9–6	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–09A0–6	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–07A5–2	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–02A7–6	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 29 – SRT Unit VFD Parameters — RGS/RAS090-150, RHH090-102, RHS090-102, RHS120, RGH/RAH090-120

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA364	ACH550–U0–012A–2	1.7 HP 230V	HD56FR233	230	5.8	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	1.7 HP 460V	HD56FR463	460	2.9	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA366	ACH550–U0–017A–2	1.7 HP 575V	HD56FR579	575	3.1	60Hz	1725	1.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–06A9–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–06A9–4	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–06A9–4	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–012A–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–03A9–6	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–09A0–6	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–07A5–2	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–02A7–6	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 30 – STR Unit VFD Parameters — 48/50TC 16, 50TCQ 14, 48/50HC 14 and 50HCQ 12

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–017A–2	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–024A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–06A9–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–06A9–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–08A8–4	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL657	230	16.7	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL657	460	8.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–03A9–6	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–06A1–6	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–09A0–6	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 31 – STR Unit VFD Parameters — 580J/558J*16, 548J*14, 581J/551J*14 and 549J*12

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–017A–2	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–024A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–06A9–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–06A9–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–08A8–4	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL657	230	16.7	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL657	460	8.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–03A9–6	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–06A1–6	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–09A0–6	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 32 – SRT Unit VFD Parameters — RGS/RAS180, RHS150, RGH/RAH150 and RHH120

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–012A–2	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA360	ACH550–U0–017A–2	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA352	ACH550–U0–024A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–024A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–06A9–4	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–06A9–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–08A8–4	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL657	230	16.7	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL657	460	8.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–03A9–6	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–06A1–6	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–09A0–6	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 33 – MRT Unit VFD Parameters — 48/50TC17-30, 50TCQ 17-24 and 48/50HC 17-28

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–017A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–024A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–024A–2	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–024A–2	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–024A–2	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–031A–2	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–031A–2	7.5 HP 230V	HD62FK654	230	23.5	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	27.0	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A9–4	7.5 HP 460V	HD62FK654	460	11.9	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–08A8–4	7.5 HP 575V	HD62FL576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL650	230	16.7	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL650	460	8.4	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–012A–4	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–015A–4	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–015A–4	7.5 HP 230V	HD62FL650	230	22.9	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	26.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A1–6	7.5 HP 460V	HD62FL650	460	11.5	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FL575	575	8.1	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FK654	230	28	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	32.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–09A0–6	10.0 HP 460V	HD64FK654	460	12.6	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	14.5	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–09A0–6	10.0 HP 575V	HD64FL576	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FL650	230	30.8	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–011A–6	10.0 HP 460V	HD64FL650	460	15.4	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FL575	575	11	60Hz	1740	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 34 – MRT Unit VFD Parameters — 580J/558J*17-30, 548J*17-24 and 581J/551J*17-28

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–017A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–024A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–024A–2	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–024A–2	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–024A–2	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–031A–2	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–031A–2	7.5 HP 230V	HD62FK654	230	23.5	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	27.0	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A9–4	7.5 HP 460V	HD62FK654	460	11.9	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–08A8–4	7.5 HP 575V	HD62FL576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL650	230	16.7	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL650	460	8.4	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–012A–4	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–015A–4	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–015A–4	7.5 HP 230V	HD62FL650	230	22.9	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	26.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A1–6	7.5 HP 460V	HD62FL650	460	11.5	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FL575	575	8.1	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FK654	230	28	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	32.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–09A0–6	10.0 HP 460V	HD64FK654	460	12.6	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	14.5	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–09A0–6	10.0 HP 575V	HD64FL576	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FL650	230	30.8	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–011A–6	10.0 HP 460V	HD64FL650	460	15.4	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FL575	575	11	60Hz	1740	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 35 – MRT Unit VFD Parameters — RGS/RAS210-303, RHS181-243 and RGH/RAH181-303

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA352	ACH550–U0–012A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA356	ACH550–U0–017A–2	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–024A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–024A–2	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–024A–2	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK657	230	14.7	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	16.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–024A–2	5.0 HP 460V	HD60FK657	460	6.8	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–031A–2	5.0 HP 575V	HD60FL576	575	5.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–031A–2	7.5 HP 230V	HD62FK654	230	23.5	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	27.0	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A9–4	7.5 HP 460V	HD62FK654	460	11.9	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–08A8–4	7.5 HP 575V	HD62FL576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.0 HP 230V	HD60FL650	230	16.7	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	19.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FL650	460	8.4	60Hz	1740	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–012A–4	5.0 HP 575V	HD60FL575	575	5.1	60Hz	1725	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–012A–4	5.3 HP 230V	HD60FK658	230	13	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	150	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.3 HP 460V	HD60FK658	460	6.4	60Hz	1740	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–015A–4	5.3 HP 575V	HD60FE576	575	5.4	60Hz	1725	5.3	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–015A–4	7.5 HP 230V	HD62FL650	230	22.9	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	26.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–06A1–6	7.5 HP 460V	HD62FL650	460	11.5	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	13.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FL575	575	8.1	60Hz	1745	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FK654	230	28	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	32.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–09A0–6	10.0 HP 460V	HD64FK654	460	12.6	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	14.5	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–09A0–6	10.0 HP 575V	HD64FL576	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–09A0–6	10.0 HP 230V	HD64FL650	230	30.8	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–011A–6	10.0 HP 460V	HD64FL650	460	15.4	60Hz	1745	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FL575	575	11	60Hz	1740	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 36 – 40RU/40RUQ Unit VFD Parameters — 40RUA/RUS 12-30 and 40RUQ 12-25

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA353	ACH550–U0–017A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK653	230	15.3	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FK653	460	6.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FK575	575	5.4	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	7.5 HP 230V	HD62FK652	230	22.4	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	25.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	7.5 HP 460V	HD62FK652	460	9.7	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	11.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FK576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–031A–2	10.0 HP 230V	HD64FK654	230	30.8	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–015A–4	10.0 HP 460V	HD64FK654	460	15.4	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FK575	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 37 – 524J***A/524J***H Unit VFD Parameters — 524J*12A-524J*28A and 524J12H-524J*25H

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA353	ACH550–U0–017A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK653	230	15.3	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FK653	460	6.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FK575	575	5.4	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	7.5 HP 230V	HD62FK652	230	22.4	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	25.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	7.5 HP 460V	HD62FK652	460	9.7	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	11.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FK576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–031A–2	10.0 HP 230V	HD64FK654	230	30.8	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–015A–4	10.0 HP 460V	HD64FK654	460	15.4	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FK575	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 38 – FAS/FHS Unit VFD Parameters — FAS120-300 and FHS120-240

VFD Part Number	ABB Part Number	Description	Motor Part Number	Voltage (9905)	Nom Amps (9906)	Motor Nom Freq (9907)	Nom RPM (9908)	Nom HP (9909)	Const Speed Sel (1201)	Const Speed 1 (1202)	Const Speed 2 (1203)	Const Speed 3 (1204)	Relay Out 3 (1403)	Max Amps (2003)	Min Freq (2007)	Max Freq (2008)	Switch Freq (2606)	Start Fcn (2101)	Stop Fcn (2102)	Accel/ Decel (2201)	Accel (2202)	Decel (2203)
HK30WA353	ACH550–U0–017A–2	2.4 HP 230V	HD56FE653	230	7.9	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	9.1	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.4 HP 460V	HD56FE653	460	4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	2.4 HP 575V	HD56FE577	575	3.4	60Hz	1725	2.4	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	3.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	2.9 HP 230V	HD58FE654	230	9.2	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	2.9 HP 460V	HD58FE654	460	4.6	60Hz	1725	2.9	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	5.3	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA353	ACH550–U0–017A–2	3.7 HP 230V	HD60FE656	230	11.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.9	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA357	ACH550–U0–08A8–4	3.7 HP 460V	HD60FE656	460	5.6	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA361	ACH550–U0–06A1–6	3.7 HP 575V	HD58FE577	575	4.2	60Hz	1725	3.7	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	4.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	5.0 HP 230V	HD60FK653	230	15.3	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.6	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	5.0 HP 460V	HD60FK653	460	6.4	60Hz	1745	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	7.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	5.0 HP 575V	HD60FK575	575	5.4	60Hz	1760	5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	6.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA354	ACH550–U0–024A–2	7.5 HP 230V	HD62FK652	230	22.4	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	25.8	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA358	ACH550–U0–012A–4	7.5 HP 460V	HD62FK652	460	9.7	60Hz	1760	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	11.2	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA362	ACH550–U0–09A0–6	7.5 HP 575V	HD62FK576	575	9.0	60Hz	1750	7.5	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	10.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA355	ACH550–U0–031A–2	10.0 HP 230V	HD64FK654	230	30.8	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	35.4	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA359	ACH550–U0–015A–4	10.0 HP 460V	HD64FK654	460	15.4	60Hz	1760	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	17.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec
HK30WA363	ACH550–U0–011A–6	10.0 HP 575V	HD64FK575	575	11.0	60Hz	1755	10	DI 2,3	40Hz	60Hz	60Hz	16 FLT/ Alarm	12.7	0Hz	60Hz	4kHz	Auto	Ramp	Not Sel	30 sec	30 sec

Standard Display Mode

Use the standard display mode to read information on the drive status and operate the drive. To reach the standard display mode, press EXIT until the LCD display shows status information as described below. (See Fig. 11.)

The top line of the LCD display shows the basic status information of the drive. The HAND icon indicates that the drive control is local from the control panel. The AUTO icon indicates that the drive is in remote control mode, such as the basic I/O or field bus.

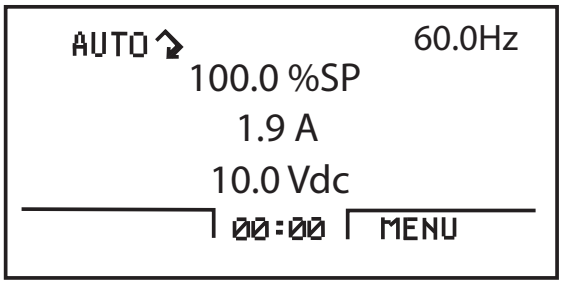
The arrow icon indicates the drive and motor rotation status. A rotating arrow (clockwise or counterclockwise) indicates that the drive is running and at set point and the shaft direction is forward or reverse. A rotating blinking arrow indicates that the drive is running but not at set point. A stationary arrow indicates that the drive is stopped. For the units covered in this manual, the correct display rotation is clockwise.

The upper right corner shows the frequency set point that the drive will maintain.

Using parameter group 34, the middle of the LCD display can be configured to display 3 parameter values. The default display shows parameters 0103 (OUTPUT FREQ) in percent speed, 0104 (CURRENT) in amperes, and 0120 (AI1) in voltage DC.

The bottom corners of the LCD display show the functions currently assigned to the two soft keys. The lower middle displays the current time (if configured to show the time).

The first time the drive is powered up, it is in the OFF mode. To switch to local hand-held control and control the drive using the control panel, press and hold the HAND button. Pressing the HAND button switches the drive to hand control while keeping the drive running. Press the AUTO button to switch to remote input control. To start the drive press the HAND or AUTO buttons, to stop the drive press the OFF button.



C09249

Fig. 11 - Standard Display Example

To adjust the speed in HAND mode, press the UP or DOWN buttons (the reference changes immediately). The reference can be modified in the local control (HAND) mode, and can be parameterized (using Group 11 reference select) to also allow modification in the remote control mode.

Parameters Mode

The Parameters mode is used to change the parameters on the drive. To change parameters, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight PARAMETERS on the display screen and press ENTER (SOFT KEY 2).
3. Use the UP or DOWN keys to highlight the desired parameter group and press SEL (SOFT KEY 2).
4. Use the UP or DOWN keys to highlight the desired parameter and press EDIT (SOFT KEY 2).
5. Use the UP or DOWN keys to change the value of the parameter.
6. Press SAVE (SOFT KEY 2) to store the modified value. Press CANCEL (SOFT KEY 1) to keep the previous value. Any modifications that are not saved will not be changed.
7. Choose another parameter or press EXIT (SOFT KEY 1) to return to the listing of parameter groups. Continue until all the parameters have been configured and then press EXIT (SOFT KEY 1) to return to the main menu.

NOTE: The current parameter value appears above the highlight parameter. To view the default parameter value, press the UP and DOWN keys simultaneously. To restore the default factory settings, select the HVAC Default application macro.

Changed Parameters Mode

The Changed Parameters mode is used to view and edit recently changed parameters on the drive. To view the changed parameters, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight CHANGED PAR on the display screen and press ENTER (SOFT KEY 2). A list of the recently changed parameters will be displayed.
3. Use the UP or DOWN keys to highlight the desired parameter group and press EDIT (SOFT KEY 2) to change the parameter if desired.
4. Press EXIT (SOFT KEY 1) to exit the Changed Parameters mode.

Drive Parameter Backup Mode

The drive parameter back up mode is used to export the parameters from one drive to another. The parameters can be uploaded from a VFD to the removable control panel. The control panel can then be transferred to another drive and the parameters downloaded into memory.

Depending on the motor and application, there are two options available. The first option is to download all parameters. This copies both application and motor parameters to the drive from the control panel. This is recommended when using the same application for drives of the same size. This can also be used to create a backup of the parameters group for the drive.

The second option downloads only the application parameters to the drive. This is recommended when using the same application for drives of different sizes. Parameters 9905, 9906, 9907, 9908, 9909, 1605, 1607, 5201, and group 51 parameters and internal motor parameters are not copied.

Upload All Parameters

To upload and store parameters in the control panel from the VFD, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight PAR BACKUP on the display screen and press ENTER (SOFT KEY 2).
3. Use the UP or DOWN keys to highlight UPLOAD TO PANEL and press SEL (SOFT KEY 2).
4. The text “Copying Parameters” will be displayed with a progress indicator. To stop the process, select ABORT (SOFT KEY 1).
5. When the upload is complete, the text “Parameter upload successful” will be displayed.
6. The display will then return to the PAR BACKUP menu. Select EXIT (SOFT KEY 1) to return to the main menu.
7. The control panel can now be disconnected from the drive.

Download All Parameters

To download all parameters from the control panel to the VFD, perform the following procedure:

1. Install the control panel with the correct parameters onto the VFD.
2. Select MENU (SOFT KEY 2). The Main menu will be displayed.
3. Use the UP or DOWN keys to highlight PAR BACKUP on the display screen and press ENTER (SOFT KEY 2).
4. Use the UP or DOWN keys to highlight DOWNLOAD TO DRIVE ALL and press SEL (SOFT KEY 2).
5. The text “Restoring Parameters” will be displayed with a progress indicator. To stop the process, select ABORT (SOFT KEY 1).
6. When the download is complete, the text “Parameter download successful” will be displayed.
7. The display will then return to the PAR BACKUP menu. Select EXIT (SOFT KEY 1) to return to the main menu.
8. The control panel can now be disconnected from the drive.

Download Application Parameters

To download application parameters only to the control panel from the VFD, perform the following procedure:

1. Install the control panel with the correct parameters onto the VFD.
2. Select MENU (SOFT KEY 2). The Main menu will be displayed.
3. Use the UP or DOWN keys to highlight PAR BACKUP on the display screen and press ENTER (SOFT KEY 2).
4. Use the UP or DOWN keys to highlight DOWNLOAD APPLICATION and press SEL (SOFT KEY 2).
5. The text “Downloading Parameters (partial)” will be displayed with a progress indicator. To stop the process, select ABORT (SOFT KEY 1).
6. When the download is complete, the text “Parameter download successful” will be displayed.
7. The display will then return to the PAR BACKUP menu. Select EXIT (SOFT KEY 1) to return to the main menu.
8. The control panel can now be disconnected from the drive.

Clock Set Mode

The clock set mode is used for setting the date and time for the internal clock of the VFD. In order to use the timer functions of the VFD control, the internal clock must be set. The date is used to determine weekdays and is visible in the fault logs.

To set the clock, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight CLOCK SET on the display screen and press ENTER (SOFT KEY 2). The clock set parameter list will be displayed.
3. Use the UP or DOWN keys to highlight CLOCK VISIBILITY and press SEL (SOFT KEY 2). This parameter is used to display or hide the clock on the screen. Use the UP or DOWN keys to change the parameter setting. Press OK (SOFT KEY 2) to save the configuration and return to the Clock Set menu.
4. Use the UP or DOWN keys to highlight SET TIME and press SEL (SOFT KEY 2). Use the UP or DOWN keys to change the hours and minutes. Press OK (SOFT KEY 2) to save the configuration and return to the Clock Set menu.
5. Use the UP or DOWN keys to highlight TIME FORMAT and press SEL (SOFT KEY 2). Use the UP or DOWN keys to change the parameter setting. Press OK (SOFT KEY 2) to save the configuration and return to the Clock Set menu.
6. Use the UP or DOWN keys to highlight SET DATE and press SEL (SOFT KEY 2). Use the UP or DOWN keys to change the day, month, and year. Press OK (SOFT KEY 2) to save the configuration and return to the Clock Set menu.
7. Use the UP or DOWN keys to highlight DATE FORMAT and press SEL (SOFT KEY 2). Use the UP or DOWN keys to change the parameter setting. Press OK (SOFT KEY 2) to save the configuration and return to the Clock Set menu.
8. Press EXIT (SOFT KEY 1) twice to return to the main menu.

I/O Settings Mode

The I/O Settings mode is used for viewing and editing the I/O settings.

To configure the I/O settings, perform the following procedure:

1. Select MENU (SOFT KEY 2). The Main menu will be displayed.
2. Use the UP or DOWN keys to highlight I/O SETTINGS on the display screen and press ENTER (SOFT KEY 2). The I/O Settings parameter list will be displayed.
3. Use the UP or DOWN keys to highlight the desired I/O setting and press SEL (SOFT KEY 2).
4. Use the UP or DOWN keys to select the parameter to view. Press OK (SOFT KEY 2).
5. Use the UP or DOWN keys to change the parameter setting. Press SAVE (SOFT KEY 2) to save the configuration. Press CANCEL (SOFT KEY 1) to keep the previous value. Any modifications that are not saved will not be changed.
6. Press EXIT (SOFT KEY 1) twice to return to the main menu.

VFD Diagnostics

The drive detects error situations and reports them using:

1. Green and red LEDs on the body of the drive (located under the keypad)
2. Status LED on the control panel
3. Control panel display
4. The Fault Word and Alarm Word parameter bits (parameters 0305 to 0309)

The form of the display depends on the severity of the error. The user can specify the severity for many errors by directing the drive to ignore the error situation, report the situation as an alarm, or report the situation as a fault.

Faults (Red LED Lit)

The VFD signals that it has detected a severe error, or fault, by:

1. Enabling the red LED on the drive (LED is either steady or flashing)
2. Setting an appropriate bit in a Fault Word parameter (0305 to 0307)
3. Overriding the control panel display with the display of a fault code
4. Stopping the motor (if it was on)
5. Sets an appropriate bit in Fault Word parameter 0305- 0307.

The fault code on the control panel display is temporary. Pressing the MENU, ENTER, UP button or DOWN buttons removes the fault message. The message reappears after a few seconds if the control panel is not touched and the fault is still active.

Alarms (Green LED Flashing)

For less severe errors, called alarms, the diagnostic display is advisory. For these situations, the drive is simply reporting that it had detected something unusual. In these situations, the drive:

1. Flashes the green LED on the drive (does not apply to alarms that arise from control panel operation errors)
2. Sets an appropriate bit in an Alarm Word parameter (0308 or 0309)
3. Overrides the control panel display with the display of an alarm code and/or name

Alarm messages disappear from the control panel display after a few seconds. The message returns periodically as long as the alarm condition exists.

Correcting Faults

The recommended corrective action for faults is shown in the Fault Listing Table 39. The VFD can also be reset to remove the fault. If an external source for a start command is selected and is active, the VFD may start immediately after fault reset.

To reset a fault indicated by a flashing red LED, turn off the power for 5 minutes. To reset a fault indicated by a red LED (not flashing), press RESET from the control panel or turn off the power for 5 minutes. Depending on the value of parameter 1604 (FAULT RESET SELECT), digital input or serial communication could also be used to reset the drive. When the fault has been corrected, the motor can be started.

History

For reference, the last three fault codes are stored into parameters 0401, 0412, 0413. For the most recent fault (identified by parameter 0401), the drive stores additional data (in parameters 0402 through 0411) to aid in troubleshooting a problem. For example, a parameter 0404 stores the motor speed at the time of the fault. To clear the fault history (all of Group 04, Fault History parameters), follow these steps:

1. In the control panel, Parameters mode, select parameter 0401.
2. Press EDIT.
3. Press the UP and DOWN buttons simultaneously.
4. Press SAVE.

Correcting Alarms

To correct alarms, first determine if the Alarm requires any corrective action (action is not always required). Use Table 40 to find and address the root cause of the problem.

If diagnostics troubleshooting has determined that the drive is defective during the warranty period, contact ABB Automation Inc., at 1-800-435-7365, option 4, option 3. A qualified technician will review the problem with the caller and make a determination regarding how to proceed. This may involve dispatching a designated service station (DSS) representative from an authorized station, dispatching a replacement unit, or advising return for repair.

Control Panel Cleaning

Use a soft damp cloth to clean the control panel. Avoid harsh cleaners which could scratch the display window.

Battery Replacement

A battery is only used in assistant control panels that have the clock function available and enabled. The battery keeps the clock operating in memory during power interruptions. The expected life for the battery is greater than ten years. To remove the battery, use a coin to rotate the battery holder on the back of the control panel. Replace the battery with type CR2032.

Table 39 – FAULT CODES

FAULT CODE	FAULT NAME IN PANEL	DESCRIPTION AND RECOMMENDED CORRECTIVE ACTION
1	OVERCURRENT	Output current is excessive. Check for excessive motor load, insufficient acceleration time (parameters 2202 ACCELER TIME 1, default 30 seconds), or faulty motor, motor cables or connections.
2	DC OVERVOLT	Intermediate circuit DC voltage is excessive. Check for static or transient over voltages in the input power supply, insufficient deceleration time (parameters 2203 DECELER TIME 1, default 30 seconds), or undersized brake chopper (if present).
3	DEV OVERTEMP	Drive heat sink is overheated. Temperature is at or above 115°C (239°F). Check for fan failure, obstructions in the air flow, dirt or dust coating on the heat sink, excessive ambient temperature, or excessive motor load.
4	SHORT CIRC	Fault current. Check for short−circuit in the motor cable(s) or motor or supply disturbances.
5	OVERLOAD	Inverter overload condition. The drive output current exceeds the ratings.
6	DC OVERVOLT	Intermediate circuit DC voltage is not sufficient. Check for missing phase in the input power supply, blown fuse, or under voltage on main circuit.
7	AI1 LOSS	Analog input 1 loss. Analog input value is less than AI1 FLT LIMIT (3021). Check source and connection for analog input and parameter settings for AI1 FLT LIMIT (3021) and 3001 AI<MIN FUNCTION.
8	AI2 LOSS	Analog input 2 loss. Analog input value is less than AI2 FLT LIMIT (3022). Check source and connection for analog input and parameter settings for AI2 FLT LIMIT (3022) and 3001 AI<MIN FUNCTION.
9	MOT OVERTEMP	Motor is too hot, as estimated by the drive. Check for overloaded motor. Adjust the parameters used for the estimate (3005 through 3009). Check the temperature sensors and Group 35 parameters.
10	PANEL LOSS	Panel communication is lost and either drive is in local control mode (the control panel displays LOC), or drive is in remote control mode (REM) and is parameterized to accept start/stop, direction or reference from the control panel. To correct check the communication lines and connections. Check parameter 3002 PANEL COMM ERROR, parameters in Group 10: Command Inputs and Group 11:Reference Select (if drive operation is REM).
11	ID RUN FAIL	The motor ID run was not completed successfully. Check motor connections.
12	MOTOR STALL	Motor or process stall. Motor is operating in the stall region. Check for excessive load or insufficient motor power. Check parameters 3010 through 3012.
13	RESERVED	Not used.
14	EXT FAULT 1	Digital input defined to report first external fault is active. See parameter 3003 EXTERNAL FAULT 1.
15	EXT FAULT 2	Digital input defined to report second external fault is active. See parameter 3004 EXTERNAL FAULT 2.
16	EARTH FAULT	The load on the input power system is out of balance. Check for faults in the motor or motor cable. Verify that motor cable does not exceed maximum specified length.
17	UNDERLOAD	Motor load is lower than expected. Check for disconnected load. Check parameters 3013 UNDERLOAD FUNCTION through 3015 UNDERLOAD CURVE.
18	THERM FAIL	Internal fault. The thermistor measuring the internal temperature of the drive is open or shorted. Contact applications engineering.
19	OPEX LINK	Internal fault. A communication−related problem has been detected between the OMIO and OINT boards. Contact applications engineering.
20	OPEX PWR	Internal fault. Low voltage condition detected on the OINT board. Contact applications engineering.
21	CURR MEAS	Internal fault. Current measurement is out of range. Contact applications engineering.
22	SUPPLY PHASE	Ripple voltage in the DC link is too high. Check for missing main phase or blown fuse.
23	RESERVED	Not used.
24	OVERSPEED	Motor speed is greater than 120% of the larger (in magnitude) of 2001 MINIMUM SPEED or 2002 MAXIMUM SPEED parameters. Check parameter settings for 2001 and 2002. Check adequacy of motor braking torque. Check applicability of torque control. Check brake chopper and resistor.
25	RESERVED	Not used.
26	DRIVE ID	Internal fault. Configuration block drive ID is not valid.
27	CONFIG FILE	Internal configuration file has an error. Contact applications engineering.
28	SERIAL 1 ERR	Field bus communication has timed out. Check fault setup (3018 COMM FAULT FUNC and 3019 COMM FAULT TIME). Check communication settings (Group 51 or 53 as appropriate). Check for poor connections and/or noise on line.
29	EFB CON FILE	Error in reading the configuration file for the field bus adapter.
30	FORCE TRIP	Fault trip forced by the field bus. See the field bus reference literature.
31	EFB 1	Fault code reserved for the EFB protocol application. The meaning is protocol dependent.
32	EFB 2	Fault code reserved for the EFB protocol application. The meaning is protocol dependent.
33	EFB 3	Fault code reserved for the EFB protocol application. The meaning is protocol dependent.
34	MOTOR PHASE	Fault in the motor circuit. One of the motor phases is lost. Check for motor fault, motor cable fault, thermal relay fault, or internal fault.
35	OUTP WIRING	Error in power wiring suspected. Check that input power wired to drive output. Check for ground faults.
101 – 105	SYSTEM ERROR	Error internal to the drive. Contact applications engineering and report the error number.

Table 39 — FAULT CODES (cont)

FAULT CODE	FAULT NAME IN PANEL	DESCRIPTION AND RECOMMENDED CORRECTIVE ACTION
201 – 206	SYSTEM ERROR	Error internal to the drive. Contact applications engineering and report the error number.
1000	PAR HZRPM	Parameter values are inconsistent. Check for any of the following: 2001 MINIMUM SPEED > 2002 MAXIMUM SPEED 2007 MINIMUM FREQ > 2008 MAXIMUM FREQ 2001 MINIMUM SPEED / 9908 MOTOR NOM SPEED is outside of the range: −128/+128 2002 MAXIMUM SPEED / 9908 MOTOR NOM SPEED is outside of the range: −128/+128 2007 MINIMUM FREQ / 9907 MOTOR NOM FREQ is outside of the range: − 128/+128 2008 MAXIMUM FREQ / 9907 MOTOR NOM FREQ is outside of the range: − 128/+128
1001	PAR PFA REFNG	Parameter values are inconsistent. Check that 2007 MINIMUM FREQ is negative, when 8123 PFA ENABLE is active.
1002	PAR PFA IOCNF	Parameter values are inconsistent. The number of programmed PFA relays does not match with Interlock configuration, when 8123 PFA ENABLE is active. Check consistency of RELAY OUTPUT parameters 1401 through 1403, and 1410 through 1412. Check 8117 NR OF AUX MOTORS, 8118 AUTOCHANGE INTERV, and 8120 INTERLOCKS.
1003	PAR AI SCALE	Parameter values are inconsistent. Check that parameter 1301 AI 1 MIN > 1302 AI 1 MAX and that parameter 1304 AI 2 MIN > 1305 AI 2 MAX.
1004	PAR AO SCALE	Parameter values are inconsistent. Check that parameter 1504 AO 1 MIN > 1505 AO 1 MAX and that parameter 1510 AO 2 MIN > 1511 AO 2 MAX.
1005	PAR PCU 2	Parameter values for power control are inconsistent: Improper motor nominal kVA or motor nominal power. Check the following parameters: 1.1 < (9906 MOTOR NOM CURR * 9905 MOTOR NOM VOLT * 1.73 / PN) < 2.6 Where: PN = 1000 * 9909 MOTOR NOM POWER (if units are kW) or PN = 746 * 9909 MOTOR NOM POWER (if units are HP, e.g., in US)
1006	PAR EXT RO	Parameter values are inconsistent. Check the extension relay module for connection and 1410 through 1412 RELAY OUTPUTS 4 through 6 have non−zero values.
1007	PAR FBUS	Parameter values are inconsistent. Check that a parameter is set for field bus control (e.g., 1001 EXT1 COMMANDS = 10 (COMM)), but 9802 COMM PROT SEL = 0.
1008	PAR PFA MODE	Parameter values are inconsistent. The 9904 MOTOR CTRL MODE must = 3 (SCALAR SPEED) when 8123 PFA ENABLE activated.
1009	PAR PCU 1	Parameter values for power control are inconsistent or improper motor nominal frequency or speed. Check for both of the following: 1 < (60 * 9907 MOTOR NOM FREQ / 9908 MOTOR NOM SPEED < 16 0.8 < 9908 MOTOR NOM SPEED / (120 * 9907 MOTOR NOM FREQ / Motor poles) < 0.992
1010	OVERRIDE/PFA CONFLICT	Override mode is enabled and PFA is activated at the same time. This cannot be done because PFA interlocks cannot be observed in the override mode.

APPENDIX - REMOTE VFD KEYPAD REFERENCE (CONT)

Table 40 – ALARM CODES

ALARM CODE	ALARM NAME IN PANEL	DESCRIPTION AND RECOMMENDED CORRECTIVE ACTION
2001	–	Reserved
2002	–	Reserved
2003	–	Reserved
2004	DIR LOCK	The change in direction being attempted is not allowed. Do not attempt to change the direction of motor rotation, or Change parameter 1003 DIRECTION to allow direction change (if reverse operation is safe).
2005	I/O COMM	Field bus communication has timed out. Check fault setup (3018 COMM FAULT FUNC and 3019 COMM FAULT TIME). Check communication settings (Group 51 or 53 as appropriate). Check for poor connections and/or noise on line.
2006	AI1 LOSS	Analog input 1 is lost, or value is less than the minimum setting. Check input source and connections. Check the parameter that sets the minimum (3021) and the parameter that sets the Alarm/Fault operation (3001).
2007	AI2 LOSS	Analog input 2 is lost, or value is less than the minimum setting. Check input source and connections. Check parameter that sets the minimum (3022) and the parameter that sets the Alarm/Fault operation (3001).
2008	PANEL LOSS	Panel communication is lost and either the VFD is in local control mode (the control panel displays HAND), or the VFD is in remote control mode (AUTO) and is parameterized to accept start/stop, direction or reference from the control panel. To correct, check the communication lines and connections, Parameter 3002 PANEL LOSS, and parameters in groups 10 COMMAND INPUTS and 11 REFERENCE SELECT (if drive operation is REM).
2009	–	Reserved
2010	MOT OVERTEMP	Motor is hot, based on either the VFD estimate or on temperature feedback. This alarm warns that a Motor Overload fault trip may be near. Check for overloaded motor. Adjust the parameters used for the estimate (3005 through 3009). Check the temperature sensors and Group 35 parameters.
2011	UNDERLOAD	Motor load is lower than expected. This alarm warns that a Motor Underload fault trip may be near. Check that the motor and drive ratings match (motor is NOT undersized for the drive). Check the settings on parameters 3013 to 3015.
2012	MOTOR STALL	Motor is operating in the stall region. This alarm warns that a Motor Stall fault trip may be near.
2013*	AUTORESET	This alarm warns that the drive is about to perform an automatic fault reset, which may start the motor. To control automatic reset, use parameter group 31 (AUTOMATIC RESET).
2014	AUTOCHANGE	This alarm warns that the PFA autochange function is active. To control PFA, use parameter group 81 (PFA) and the Pump Alternation macro.
2015	PFA INTERLOCK	This alarm warns that the PFA interlocks are active, which means that the drive cannot start any motor (when Autochange is used), or a speed regulated motor (when Autochange is not used).
2016	–	Reserved
2017*	OFF BUTTON	This alarm indicates that the OFF button has been pressed.
2018	PID SLEEP	This alarm warns that the PID sleep function is active, which means that the motor could accelerate when the PID sleep function ends. To control PID sleep, use parameters 4022 through 4026 or 4122 through 4126.
2019	ID RUN	The VFD is performing an ID run.
2020	OVERRIDE	Override mode is activated.
2021	START ENABLE 1 MISSING	This alarm warns that the Start Enable 1 signal is missing. To control Start Enable 1 function, use parameter 1608. To correct, check the digital input configuration and the communication settings.
2022	START ENABLE 2 MISSING	This alarm warns that the Start Enable 2 signal is missing. To control Start Enable 2 function, use parameter1609. To correct, check the digital input configuration and the communication settings.
2023	EMERGENCY STOP	Emergency stop is activated.

* This alarm is not indicated by a relay output, even when the relay output is configured to indicate alarm conditions, parameter 1401 RELAY OUTPUT= 5 (ALARM) or 16 (FLT/ALARM).

Edition Date: 11/13

Replaces: IIK – CRDISKIT01 – 03